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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/611,772	07/07/2000	Hans Kroner	GR 99 P 2263	7415

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EXAMINER	
TRAN, TUAN A	

ART UNIT	PAPER NUMBER
2682	23

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/611,772	Applicant(s) KRONER, HANS
	Examiner Tuan A Tran	Art Unit 2682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 May 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made

1. Claims 1-14, 21-22 and 27-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Le Strat et al. (6,134,220).

Regarding claims 1-3, 7, 10-11 and 30, Le Strat discloses a method and apparatus for allocating a transmission capacity to connections in a radio communication system wherein the radio communication system is a mobile radio system (See fig. 1), comprising: allocating a transmission rate to a connection established via a radio communication interface between a base transceiver station and a subscriber station in at least one of downlink and uplink directions in dependence of signal quality comprising: interference situation at a location of the subscriber station in a radio cell of the base transceiver station, wherein the interference situation comprises intracell interference; a distance between the subscriber station and the base transceiver station; the power of the received signal; bit error rate; signal to noise ratio; estimate of the impulse response; a current load in a radio cell of the base transceiver station, ect. (See figs. 1-2 and Abstract, col. 3 line 38 to col. 7 line 55, col. 9 line 64 to col. 10 line

58, col. 11 lines 11-45). However, Le Strat does not mention that allocating a transmission rate to a connection established via a radio communication interface between a base transceiver station and a subscriber station in dependence of a connection-specific path loss of the radio communication interface. Official notice has been taken that path loss is one of the many well known parameters that have been used to evaluate signal quality and the derivation of connection-specific path loss of the radio communication interface from other signal quality criterions such as the power of the received signal and the distance between the subscriber station and the base transceiver station is common in the art; therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included path loss, as an parameter of the signal quality taken into consideration along with other parameters as suggested by Le Strat, to allocate transmission rate for the advantage of expanding the application of the system to various parameters to accurately refine the analysis.

Claim 32 is rejected for the same reasons as set forth in claim 1, as apparatus.

Regarding claims 4-6, Le Strat further discloses the step of providing a variable transmission rate for transmitting at least one service with the connection wherein non-real-time service and real-time service as the at least one service and carrying out an adaptive coding (See col. 11 lines 17-55).

Regarding claims 8-9, Le Strat discloses as cited in claim 1. However, Le Strat does not mention the step of varying the transmission rate in dependence

of a relative transmitter power or an absolute transmitter power of the connection. Since Le Strat does suggest the step of varying the transmission rate in dependence of power of the received signal, load and interference (See col. 6 lines 34-54) and the relationship between the load interference and transmission power including relative or absolute transmitter power are common in the art, therefore it would be obvious to take relative or absolute transmitter power into consideration in allocating transmission rate for the advantage of expanding the application of the system to various parameters to accurately refine the analysis.

Regarding claims 12-14 and 27, Le Strat discloses as cited in claim 1. However, Le Strat not mention the step of carrying out a subscriber separation in a radio communication system in accordance with a CDMA method comprising the step of using orthogonal spreading codes in at least one of downlink or uplink directions. CDMA is a well-known modulation skim in the art wherein the transmission rate being defined by respective spreading codes (or orthogonal spreading codes) and inherently respective spreading factors, and a single wideband is used for all users in the downlink direction. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method and system as disclosed by Le Strat by utilizing CDMA for the advantage of expanding the capability of the system to various modulation skims as well as reducing co-channel interference in communications between base stations and mobile stations.

Regarding claim 21, Le Strat disclose as cited in claim 1. However, Le Strat does not mention the step of using path loss measurements for allocating

the transmission rate, carried out by the subscriber station, for handover purpose. Handover process takes place very often in the mobile communication system, therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the Le Strat's suggestion in allocating the transmission rate in dependence of path loss measurements, carried out by the subscriber station, for the handover purpose in order to maintain quality of service throughout the call.

Regarding claim 22, Le Strat discloses as cited in claim 1. However, they do not mention the step of allocating the transmission rate with an overload control function based on the path loss measurements. Since the inter-relationship between load, interference and path loss is well known in the art; therefore it would be obvious to establish the step of allocating the transmission rate with the overload control function based on path loss measurements in order to expand the capability of the system, as disclosed by Le Strat to various parameters to accurately refine the analysis.

Regarding claim 28, Le Strat further discloses the step of carrying out a joint detection method at a reception end in at least one of downlink and uplink directions (See Abstract and col. 9 lines 63-67).

Regarding claim 29, Le Strat discloses as cited in claim 1, but Le Strat does not mention organizing the radio communication interface in accordance with a TDD method. TDD method, wherein transmissions in a downlink direction and in an uplink direction at separate times in a same frequency band, is a well-known modulation skim in the art. Therefore, it would have been obvious to one

of ordinary skill in the art at the time the invention was made to have the system as disclosed by Le Strat utilized TDD for the advantage of extending the applications of the system.

Regarding claim 31, Le Strat disclose as cited in claim 1, but Le Strat does mention providing the radio communication system as a wireless subscriber line system. Wireless subscriber line system is well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the system as disclosed by Le Strat structured as a wireless subscriber line system in order to provide different services to users.

2. Claims 15-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Le Strat et al. (6,134,220) as applied to claim 1 above, and further in view of Johansson et al. (6,473,399) and Rathonyi et al. (6,359,877).

Regarding claims 15-20, Le Strat discloses as cited in claim 1. However, Le Strat does not mention the step of allocating the long-term transmission rate by using a Transport Format Set, selected by the MAC layer, of the configuration/reconfiguration, restriction procedures and utilization-level and connection-acceptance control function of the RRC layer. Johansson teaches the same radio communication system as disclosed by Le Strat wherein the MAC layer selects Transport Format Set in accordance to the control of RRC layer (See figs. 3-4 and col. 5 line 66 to col. 6 line 41), and wherein the control of the RRC is defined by the configuration/reconfiguration, restriction procedures and utilization-level and connection-acceptance control function and TF (Transport

Formats) is defined by the long-term transmission rate as disclosed by Rathonyi (See col. 3 lines 17-35, col. 5 lines 48-58). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the teaching of Johansson & Rathonyi in modifying the system as disclosed by Le Strat by utilizing the protocol layers for the advantage of achieving interconnectivity between peer entities residing within mobile stations and cellular switching systems with high QoS (quality of service).

3. Claims 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Le Strat et al. (6,134,220) as applied to claim 1 above, and further in view of Pehrson (6,339,705).

Regarding claim 23, Le Strat discloses as cited in claim 1. However, Le Strat fails to show signaling a transmitter power for a carrier of the base transceiver station to a RNC via an Iub interface. Pehrson discloses signaling a transmitter power for a carrier of the base transceiver station to a RNC via an Iub interface (See fig. 1 and col. 1 lines 24-46). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modified the system as disclosed by Le Strat by Pehrson in order to control transmission power properly.

Regarding claim 24, Le Strat discloses as cited in claim 1. However, Le Strat fails to show signaling a transmitter power for a carrier of the base transceiver station to a RNC via an Iub interface by adding an appropriate field within an Iub/Iur user frame protocol. Adding an appropriate field within an

Iub/Iur user frame protocol is a well known technique in the art, therefore it would be obvious to one skilled in the art to apply this technique in order to rout the control signaling messages properly within cellular switching systems.

Regarding claims 25-26, Le Strat discloses as cited in claim 1. However, Le Strat fails to show signaling a transmitter power for a carrier of the base transceiver station to a RNC via an Iub interface by using independent periodic signaling message or event-controlled signaling message. Pehrson discloses signaling a transmitter power for a carrier of the base transceiver station to a RNC via an Iub interface (See fig. 1 and col. 1 lines 24-46). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modified the system as disclosed by Le Strat and further using independent periodic signaling message or event-controlled signaling message as intended use in order to extend the capability of the system as well as to control transmission power properly.

Response to Arguments

Applicant's arguments filed 05/27/2004 have been fully considered but they are not persuasive.

a. Upon the Applicant's request (See Remark, page 2-8), the Examiner would like to present U.S Patent 5,983,383 (See col. 1 lines 25-30) and U.S patent 6,496,543 (See col. 2 lines 18-23, col. 4 lines 40-49) as evidences to support the Examiner's statement that path loss is one of the many well known parameters that have been used to evaluate signal quality and the derivation of

connection-specific path loss of the radio communication interface from other signal quality criterions such as the power of the received signal and the distance between the subscriber station and the base transceiver station is common in the art. For this reasons, the examiner remains the rejections for all pending claims.

b. The Applicant argued that Johansson, Rathonyi and Pehrson do not show a transmission rate in dependence on "a connection-specific path loss" and "an interference situation at the location of the subscriber station" (See Remark, page 9-11). The Examiner also recognizes that Applicants should consider the references as a whole since the test for combining references is what the combination of disclosures taken as a whole would suggest to one of ordinary skill in the art. In this case, Le Strat discloses a method and apparatus for allocating a transmission capacity to connections in a radio communication system wherein the radio communication system is a mobile radio system comprising: allocating a transmission rate to a connection established via a radio communication interface between a base transceiver station and a subscriber station in at least one of downlink and uplink directions in dependence of signal quality comprising: interference situation at a location of the subscriber station in a radio cell of the base transceiver station, wherein the interference situation comprises intracell interference; a distance between the subscriber station and the base transceiver station; the power of the received signal; bit error rate; signal to noise ratio; estimate of the impulse response; a current load in a radio cell of the base transceiver station, wherein path loss is one of the many well known parameters that have been used to evaluate signal quality and the

derivation of connection-specific path loss of the radio communication interface from other signal quality criterions such as the power of the received signal and the distance between the subscriber station and the base transceiver station is common in the art, and Johansson teaches the same radio communication system as disclosed by Le Strat wherein the MAC layer selects Transport Format Set in accordance to the control of RRC layer, and wherein the control of the RRC is defined by the configuration/reconfiguration, restriction procedures and utilization-level and connection-acceptance control function and TF (Transport Formats) is defined by the long-term transmission rate as disclosed by Rathonyi, and further Pehrson discloses signaling a transmitter power for a carrier of the base transceiver station to a RNC via an Iub interface; therefore, in combination the system Le Strat as modified by Johansson, Rathonyi and Pehrson would arrive the claimed subject matter.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be

calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Tuan Tran** whose telephone number is **(703) 605-4255**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Vivian Chin**, can be reached at **(703) 308-6739**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Tuan Tran

AU 2682

VIVIAN CHIN
SUPERVISORY PATENT EXAMINER
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